



US 20170236512A1

(19) **United States**(12) **Patent Application Publication**  
**Williams et al.**(10) **Pub. No.: US 2017/0236512 A1**(43) **Pub. Date: Aug. 17, 2017**(54) **PROCESSING SPOKEN COMMANDS TO  
CONTROL DISTRIBUTED AUDIO OUTPUTS***G10L 13/02* (2006.01)*G06F 17/28* (2006.01)(71) Applicant: **Amazon Technologies, Inc.**, Seattle,  
WA (US)(72) Inventors: **Robert Williams**, San Francisco, CA  
(US); **Steven Todd Rabuchin**,  
Kirkland, WA (US); **Gregory Michael  
Hart**, Mercer Island, WA (US)(21) Appl. No.: **15/083,902**(22) Filed: **Mar. 29, 2016****Related U.S. Application Data**(60) Provisional application No. 62/294,926, filed on Feb.  
12, 2016.**Publication Classification**(51) **Int. Cl.**  
*G10L 15/22* (2006.01)  
*G06F 17/30* (2006.01)  
*H04R 3/12* (2006.01)  
*G06F 3/16* (2006.01)(52) **U.S. Cl.**CPC ..... *G10L 15/22* (2013.01); *G10L 13/02*  
(2013.01); *G06F 17/28* (2013.01); *H04R 3/12*  
(2013.01); *G06F 3/165* (2013.01); *G06F*  
*17/30749* (2013.01); *H04R 2420/07* (2013.01);  
*H04R 2430/01* (2013.01)

(57)

**ABSTRACT**

A system that is capable of controlling multiple entertainment systems and/or speakers using voice commands. The system receives voice commands and may determine audio sources and speakers indicated by the voice commands. The system may generate audio data from the audio sources and may send the audio data to the speakers using multiple interfaces. For example, the system may send the audio data directly to the speakers using a network address, may send the audio data to the speakers via a voice-enabled device or may send the audio data to the speakers via a speaker controller. The system may generate output zones including multiple speakers and may associate input devices with speakers within the output zones. For example, the system may receive a voice command from an input device in an output zone and may reduce output audio generated by speakers in the output zone.

